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ABSTRACT

Foreigner talk is the register used by native speakers to make themselves understood by foreigners whose competence in the language is limited. Published studies on foreigner talk have dealt with phonetic variation sparingly and impressionistically. This may be due to the difficulty of imposing experimental constraints on natural linguistic events without introducing excessive artificiality. A method is described permitting systematic analysis of a selected phonetic variable (voice onset time in fortis English plosives) in the context of naturalistic conversations between native speakers and foreigners of varying levels of competence in the language of communication. This paper is intended to encourage greater interest in foreigner talk and to improve the quality of data in experimental phonetics by bringing it closer to the encounter between speaker and listener. (Author/NCR)

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A Methodological Contribution to the Phonetic Study of Foreigner Talk

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It has been assumed that speakers of most, if not all languages have, in their verbal repertoire, a special register "for use with people who are regarded for one reason or another as unable to readily understand the normal speech of the community", for example babies, foreigners, or those displaying a pathological language deficit (Ferguson 1971:143). A common factor of such specialized registers is the feeling held by native speakers that such speech is somehow easier to understand than normal speech. It could therefore be taken by linguists as evidence of linguistic simplification, a concept possibly as important to linguistic theory as it is, at present, poorly understood. Simplicity has been evoked as a criterion for choosing between alternative grammatical descriptions (Chomsky and Halle 1968:296), and it is crucial to such moot points in linguistic theory as deep structure and universals. It is also a major feature of studies of language acquisition and language loss, it being expected that simpler features will be acquired earlier by the child, be lost later by victims of certain forms of aphasia, and be more widely attested in the languages of the world (Jakobson 1968).

Foreigner talk (hereinafter'FT'), the name given by Charles Ferguson to those simplified registers used to address foreigners of limited competence in the language of a speech community, may act as an incipient pidgin, thus providing insight into the problems of languages in contact. It may be in universal processes of FT simplification that lies the explanation for the remarkable similarities between creoles spoken in geographically distant regions and descended from unrelated parent languages. FT used by many foreign language teachers may explain in part the comprehension difficulties faced by so many students when first plummeted in the target-language community.

In addition to the primary use of FT, Ferguson (1975:2) points to various extended uses, essentially in (narrative) reports of the speech of foreigners.[1] For example, FT may be used with comic effect to evoke foreigners as in the cartoon showing a tourist pouring equal amounts of Coca-Cola and Bordeaux wine into the same glass, announcing to a rather startled collection of continental drinkers: "Il s'appelle COKE AU VIN dans ma pays."

Most published studies of FT have concentrated on variation at the levels of syntax and lexicon. Phonetic studies have either been lacking or impressionistic (as in Henzl 1973). However, experimental work in this area would be particularly valuable, since only instrumental studies could validate phonetic claims. If such research is not now abundant, one reason for this may be the rather considerable difficulty of studying FT under rigorous experimental conditions.

It would appear to require a degree of ingenuity to conceive of a framework where experimental constraints are imposed on natural linguistic events without introducing excessive artificiality. In simplest diagrammatic terms, the study of FT (in its primary sense as the register used by native speakers to make themselves understood by foreigners whose competence in their language is felt to be limited) presupposes the interactional schema shown in Fig.1, where NS = native speaker of the language of communication (L_{com}); F = foreigner of limited competence in L_{com}; and NS_c = native speaker control-receiver.

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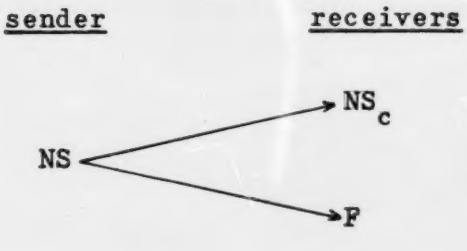

Figure 1 : Basic Interactional Schema

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In other words, a comparison must be made between a NS's speech in two different situations: first a putatively "normal speech" situation, where the receiver (NS_c) shares the speaker's mother tongue and secondly in the FT situation, with native sender and foreign receiver. However, by multiplying the number of foreign receivers, taking care to select those with dissimilar levels in L_{com}, it should be possible to investigate whether variation is essentially binary (± FT) or whether variation follows a continuum extending from normal speech to increasingly marked FT in response to the perceived linguistic limitations of the receiver. A revised experimental schema is shown in Fig. 2 where, for purposes of comparison,

an indeterminate number of NS subjects interact with one other NS and three Fs of decreasing levels of competence in L_{com} (F_3 = near-native; F_2 = intermediate; F_1 = non-fluent).

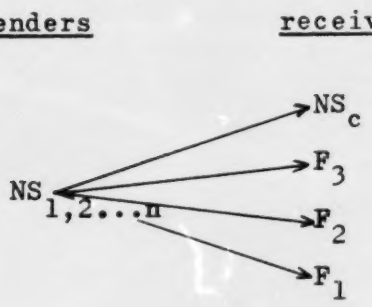

Figure 2 : Revised Interactional Schema

In order to carry out a phonetic study using this framework, it is necessary to respect an impressive and seemingly contradictory array of experimental constraints. First, one must establish the non-variability of the lexico-syntactic environment in which a selected phonetic variable (or variables) is to be studied. One would not, for example, want a subject to speak of football with a fellow Englishman and medieval theology with a foreigner, if one wishes to study that subject's pronunciation as a function of his interlocutor. For such purposes, both the subject-matter and the syntactic context of the variable under examination should remain constant for each sender-receiver dyad. The easiest way to achieve this would be to reserve a slot for the variable in an unvarying syntactic frame to be read. However, this would conflict with a second requirement of the experiment, namely that speakers must be free to interact as naturally as possible with their interlocutors. Labov (1972) and others have found that reading-style is phonetically distinct from normal speech, something that can be easily verified by asking anyone who is not accustomed to reading out loud to do so. A third experimental requirement that would appear to be equally in conflict with the "naturalness" condition is the need for the speaker to be recorded in conditions suitable for phonetic exploitation of the resulting documents. That is to say, the speaker must be seated in front of a (possibly intimidating) microphone in a sound-treated recording studio. Furthermore, he will have to repeat essentially the same thing to each of four successive interlocutors--rather a shattering threat to naturalness. Also, if phonetic variation is to be viewed as accomodation to the receiver's perceived linguistic competence, it is necessary for extraneous influences, such as those due

to their dress and general appearance to be controlled. As it is not possible, short of finding identical quadruplets with the appropriate levels of English, for receivers to have exactly the same appearance, it would be best not to allow subjects to see those whom they are addressing. A further very important requirement is that the interventions of the receivers, by which their level of English is judged, should be non-varying, for only then can FT used by a range of NS subjects be taken as responses to the same stimuli. If the foreigners were to engage in essentially the same conversation several times, once with each of a number of NSs, there would be danger of a learning-effect, so that F_1 would not display the same level of competence with NS_1 as with NS_n. A possible, though unnatural solution to the need for both non-varying stimuli and the avoidance of visual contact between sender and receiver would be to pre-record the interventions of the latter. Finally, two further constraints have to be observed. First, the actual purpose of the experiment should be withheld from the subjects, as it is essential for their speech to be a natural consequence of the interactional situation, and not the product of conscious tampering with accent. It is also desirable for subjects to be positively motivated to communicate with their interlocutors. Marked hostility on the part of subjects could surely affect pronunciation and thereby jeopardize the validity of the data.

It is clear that any attempt to meet these various demands depends largely on the particular phonetic variable(s) selected for analysis. The experiment reported on here concentrates on the duration of the voiceless period between the release of fortis English plosives and the onset of voicing for the following (stressed) vowel. Often regarded as aspiration, it is more precisely referred to as voice onset time ('VOT') in numerous publications of Abramson, Lisker, and others (e.g. Lisker and Abramson 1964). This variable was chosen because it is easily quantifiable, apparently beyond the conscious control of most English speakers, and functionally important in terms of the fortis/lenis contrast before stressed vowels. It is widely accepted (cf. Gimson 1970:153) that primarily the presence or absence of aspiration, rather than voice enables the listener to distinguish between English /ptk/ and /bdg/ initially in accented syllables; so it may be hypothesized that in wishing to make himself more easily understood by a foreigner the NS would aspirate more strongly than usual. To test this hypothesis, a corpus was set up consisting of 18 bi-syllabic words with identical stress-patterns, divided equally among the three fortis plosives, each one occuring twice before each of the following vowels: /i:/, /i/, /ɑ:/. Such a corpus has the advantage of making it possible to determine whether FT variation is dependent on either the place of articulation of the consonant or on the quality of the following vowel.

The semantic field covered by the corpus was chosen in accordance with the methodological constraints previously cited. For a list of words to be inserted in a single lexico-

syntactic frame (or sentence) which can in turn be repeated many times by a single speaker without excessive artificiality, a situation which would normally call for repetition of a set-phrase was sought. The fact that some people's speech, such as that of airline reservation personnel, tends to deviate litle from certain "canned messages", as remarked by Hatch et al. (1975:13), suggests that it would be reasonable for the employees of a shop or business to be required to conform to certain formulae for giving out information, as in quoting prices. It is conceivable that a particular shop might indeed wish to standardize the language of its staff not only to make sure that information is given out efficiently, but also to create a certain image. By casting NS subjects in the rôle of shop assistant for a luxury caterers, obliged to quote the prices of various foods, a corpus satisfying the needs of the experiment could be contextualized in the following frame, thanks to the richness of the semantic field "foods":

Our	(peaches)	is/are	(63)	pence a pound.
	(pigeon)		(42)	
	(partridge)		(84)	
	etc.		etc.	

By having the exchanges between "shop assistant" and "customer" take the form of telephone conversations, several experimental conditions can be satisfied. The ubiquitous microphone could be construed as a convenient substitute for the mouthpiece of the telephone, and, of course, the physical presence of "callers" would not be missed. Most importantly, the highly structured nature of a typical customer-to-shop phone conversation (where caller identifies himself, states his business, asks questions or gives information, and closes) means that the caller's half of the conversation could be pre-recorded, with pauses left for the subjects' eventual responses.

The experiment proceeded as follows. Ten subjects, all NSs of Southern British English, were told that their responses in the rôle of shop assistant to a large caterers would serve as the basis for a study to compare comprehension on the part of NSs with that of foreign students of English. Their attention was further diverted from the corpus items by explaining that the key-items on the (bogus) comprehension test would be the prices, "because of their low linguistic redundancy." The subjects were given a price list and informed that "management" required all prices to be quoted according to a set formula, which was practiced in response to the experimenter's questions until it became natural. Subjects were also encouraged to make any additional comments they should wish before or after the set reply, it being stressed that naturalness was very important. They were then "rung up" by four customers representing, respectively, the French embassy (F_1), a major hotel (F_2), an exclusive club (F_3), and the House of Commons (NS_c), each caller being responsible for the organization of some sort of lavish banquet and needing to know the prices of a list of foods. To prevent the corpus-items from

being too conspicuous, they appeared in each conversation in a different order, interspersed with varying filler items. Also, prices were made to vary from customer to customer.

After the fourth and final conversation, subjects were asked to rate each interlocutor--after listening to their voices again--on scales of personal attractiveness and linguistic competence, according to the semantic differential format (Osgood, et al. 1957).[2] These ratings permit evaluation of phonetic variation as a function of receiver characteristics. The final stage of the experiment consisted of a test of auditory discrimination administered to the subjects in order to make possible correlations between eventual differences in phonetic accomodation to foreigners and a speaker's particular degree of auditory perceptiveness.[3]

Technical details concerning the various recordings are as follows. The "callers", one Englishman and three Frenchmen, all from the East of France[4], were each provided with a list of foods arranged in logical categories and a suggested rôle, e.g. chef, catering-manager, etc. After agreeing on a format for a simulated phone conversation, each of them sat at approximately 25 cms. from a (Neumann KM 54) uni-directional microphone in the sound-treated recording studio of the Phonetics Laboratory of the University of Strasbourg. To guarantee a true dialogue effect, the experimenter, standing outside of the studio, played the rôle of shop assistant, speaking into a microphone which was linked to a non-insulating (Sennheiser HD-424) headset worn by the "caller". The latter's questions and comments were recorded at 19 cm/s (on a Schlumberger F-230 tape-recorder) and later edited with minimal pauses left for subjects' responses. A telephone effect was subsequently obtained by filtering out frequencies below 500 Hz and above 2500 Hz. The stimulus-tapes were then ready for the recording of the NS subjects.

Each subject sat in the same sound-treated studio at a table upon which were placed the appropriate price-list and microphone (equipment and conditions as above). At one side of the table, the experimenter, following a transcript of the callers' stimuli, was able to control the output of a small (Uher 4200) tape-recorder, placed under the table, on which the caller's half of the conversation was played. This was monitored both by the subject and the experimenter using light-weight non-insulating headsets. Through manipulation of the "pause" control, it was possible for the experimenter to "reply to" and even "interrupt" the subjects by means of the surprisingly appropos comments of the customer-callers.

From the four conversations recorded by each subject, the set phrases containing each of the corpus items were extracted and re-recorded for ease of comparison on a separate tape. Oscillographic tracings, with supplementary pitch and intensity tracings, were then made from these tapes, making possible careful measurement of a set of phonetic variables including VOT.

The large number of data as well as their multidimensionality made statistical analysis appropriate. Comparisons of mean VOT for the various CV sequences of the corpus as a function of listener's competence revealed no significant variation in VOT in terms of the receivers' four distinct levels of English. (Cluster analyses of speakers' evaluations of the receivers' levels indicated significant agreement between subjects--and the experimenter--in terms of the levels of English represented, these levels correlating with the relative magnitude of segmental errors in the receivers' pronunciation of the corpus items.)

In interpreting these results, it must be asked whether or not the experimental conditions might have proscribed true FT interaction. In support of the view that the material studied constituted true specimens of FT, it must be noted that the degree of "conversational interaction" based on a count of the total number of words addressed to each interlocutor by a subject did vary in terms of the receiver's linguistic competence, a higher amount of interaction going hand in hand with a greater level of fluency. It must therefore be concluded that:

a) either VOT does not vary significantly in FT, or that
b) it may so vary, but certain experimental conditions must have masked the effect.

As examples of the latter, one might cite the fact that the foreigners participating in the experiment were all fluent speakers of German (Alsatian dialect) in which aspirated plosives are a staple of the phonetic repertoire; or the fact that subjects may have been incited--by the observer's paradox and the conspicuousness of the microphone--to articulate AS CLEARLY AS POSSIBLE irrespective of their interlocutor.

It is, however, interesting to note that a significant correlation was established--by means of multiple regressions--between VOT and the speaker's degree of phonetic sensitivity as determined by the auditory discrimination test. VOT for all CV combinations in the corpus was significantly ($p < .05$) higher among those speakers who achieved higher scores on the perception test. (Previous contact with foreigners also appeared to correlate with increased VOT; however, this result must be regarded as tentative, considering the great difficulty of assessing the amount and quality of such contact without resorting to subjective measures such as that used in the study, where subjects were asked to estimate the amount of such contact on a scale ranging from "almost none" to "considerable".)

On a purely phonetic level--without taking into account changes of speaker and listener—VOT was found to depend on both the place of articulation of the stop and on the quality of the following vowel. Mean VOT for /p/ is significantly less than that of /t/ and /k/ if no distinction is made for the following vowel. However, if a subsequent close front vowel (/i:/ or /i/) lengthens the VOT of /t/ and /k/, the opposite is true of the bilabial; VOT of /p/ being

greatest, in terms of the corpus at hand, before /ɑ:/.

It would seem that the methodological difficulties faced by experimental phonetic study of FT, while clearly challenging, need not be insurmountable. It is hoped that an approach like that described in this paper will serve not only to arouse greater interest in FT, but also to improve the quality of data in experimental phonetics, by bringing it closer to a frequently expunged linguistic reality: the encounter between speaker and listener.[5]

Notes

1. Indeed, Ferguson (1975:1) suggests that an effective way to elicit FT is not merely to ask someone how he would modify his speech to make it understandable to a foreigner, but rather to ask him how foreigners themselves sound. Just as the usual adult rendition of Baby Talk is a closer approximation of the way adults themselves speak to babies than of the way babies actually talk, imitations of foreigners may depend more heavily on conventionalized simplification processes than they do on foreigners' actual speech patterns.

2. See appendix for sample Speaker Differential Sheet.

3. The test consisted of twenty sets of three sounds (generally English words); in each set, one sound differed in its phonetic realization from the other two. Subjects were asked to indicate which of the three, if any, differed from the other two, after hearing each set twice.

4. F_3 is a university lecturer in English; F_2 was a first-year English specialist at the University of Strasbourg at the time of the recording; F_1 is a member of a university French department and had no experience of English beyond elementary lycée study of the language.

5. For a fuller exposition and discussion of results, see Wenk (1978). The technical assistance of Gilbert Brock is gratefully acknowledged, as is the guidance provided for statistical analyses by Jean-Claude Rehm and the author of the computer programmes used, Daniel Guinier. This work has benefitted from discussion with several colleagues, especially François Wioland and André Bothorel.

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Appendix

SPEAKER DIFFERENTIAL SHEET

Important: (1) Place your check-marks in the middle of the spaces, not on the boundaries.

(2) Be sure to answer each question; do not omit any.

(3) Never put more than one check-mark on a single scale.

* * * * *

1. How would you characterize the speaker's grammar?

Native ___:___:___:___:___:___:___ Foreign

2. How would you characterize the speaker's pronunciation?

Foreign ___:___:___:___:___:___:___ Native

3. Indicate the impressions you got about the speaker's mood and personality:

a) Tense ___:___:___:___:___:___:___ Relaxed

b) Boring___:___:___:___:___:___:___Interesting

c) Jovial___:___:___:___:___:___:___Matter-of-fact

d) Dull ___:___:___:___:___:___:___ Bright

4. How would you characterize the speaker's choice of words?

Native ___:___:___:___:___:___:___ Foreign

5. Indicate how you would expect the speaker to perform when tested for his understanding of spoken English:

Unsuccessfully___:___:___:___:___:___:___Successfully

* * * * *

You may use the space below for any further comments concerning the speaker and the language he uses.